

SEQ ID NO:6, SEQ ID NO:9, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:23, SEQ ID NO:29, SEQ ID NO:43, SEQ ID NO:44 and SEQ ID NO:45.

- Q4 9. (Once amended) A nanoscale particle comprising the membrane scaffold protein of claim 1 and at least one hydrophobic or partially hydrophobic protein, and optionally further comprising a phospholipid or a mixture of phospholipids, wherein said nanoscale particle has a diameter between about 5 nm and about 500 nm.
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- Q5 19. (Once amended) The nanoscale particle of claim 9, wherein said membrane scaffold protein comprises an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:9, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:23, SEQ ID NO:29, SEQ ID NO:43, SEQ ID NO:44 and SEQ ID NO:45.
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- Q6 27. (Once amended) The method of claim 20, wherein said membrane scaffold protein comprises an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:9, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:23, SEQ ID NO:29, SEQ ID NO:43, SEQ ID NO:44 and SEQ ID NO:45.

28. (Once amended) The method of claim 20, wherein said at least one hydrophobic or partially hydrophobic protein is associated with membranes or membrane fragments.
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29 was omitted from the claim numbering in the original submission. Please rewrite original claims 30 - 36 and renumber them 29 - 35 as follows:

- Q7 29. (Once amended) A method for identifying an competitor of binding of a ligand to a receptor protein wherein said receptor protein is incorporated within a nanoscale particle together with a membrane scaffold protein, said method comprising the steps of:

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(a) contacting a nanoscale particle comprising a membrane scaffold protein and a receptor protein with a detectable ligand to produce nanoscale particle-bound detectable ligand;

(b) contacting the nanoscale particle-bound ligand with a test compound;

(c) measuring detectable ligand released from the nanoscale particles;

whereby a competitor of ligand binding is identified when contacting the nanoscale particle-bound ligand results in release of the detectable ligand.

30. (Once amended) The method of claim 29, wherein said receptor protein is a membrane protein.

31. (Once amended) The method of claim 30, wherein said receptor protein is a G-protein coupled receptor.

32. The method of claim 31, wherein said G-protein coupled receptor is a 5-hydroxytryptamine receptor.

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33. (Once amended) The method of claim 29, wherein said membrane scaffold protein comprises an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:9, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:23, SEQ ID NO:29, SEQ ID NO:43, SEQ ID NO:44 and SEQ ID NO:45.

34. A DNA molecule encoding a membrane scaffold protein, wherein said membrane scaffold protein comprises an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:9, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:23, SEQ ID NO:29, SEQ ID NO:43, SEQ ID NO:44 and SEQ ID NO:45.

35. A recombinant host cell comprising the DNA molecule of claim 34.